

**KSC PRESS SITE TRANSFORMER BLDG. (K7-1205C)
SWMU 074**

**INTERIM MEASURE WORK PLAN
KENNEDY SPACE CENTER, FLORIDA**

Prepared for:



**National Aeronautics and Space Administration
Kennedy Space Center, Florida**

**December 2014
Revision 0**

Prepared by:

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KSC PRESS SITE TRANSFORMER BLDG. (K7-1205C)
SWMU 074
PRESS SITE

INTERIM MEASURE WORK PLAN (REVISION 0)

KENNEDY SPACE CENTER, FLORIDA

Prepared for:
Environmental Assurance Branch
National Aeronautics and Space Administration
John F. Kennedy Space Center
Kennedy Space Center, Florida 32899

Prepared by:
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December 2014

I hereby certify that this Interim Measure Work Plan for the Kennedy Space Center (KSC) Press Site Transformer Bldg. (K7-1205C) located at the John F. Kennedy Space Center, Florida, was prepared using appropriate geologic, hydrogeologic, and engineering standards of practice.

A. Scott Starr, P.E.
State of Florida License No. 56319
Certificate of Authorization No. 7917

Date: _____

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INTERIM MEASURE WORK PLAN FOR PCB-CONTAMINATED SITES

Facility Name/SWMU No.: Press Site Area – Transformer Building (K7-1205C) –
SWMU 074

Consultant/PM: ARCADIS / Scott Starr

NASA RPM: Harry Plaza

CAMP Date:

Prepared On: December 15, 2014

Revised On:

NOTE: This work plan will be implemented in accordance with the provisions presented in NASA-KSC's *Generic Work Plan for the Investigation And Cleanup of PCB-Contaminated Sites under the Toxic Substances Control Act* (February 2007), unless otherwise noted below.

General

1. What is the purpose of this proposed Interim Measure? Include a list of the parameter groups being addressed by the IM. This document presents and discusses the Interim Measure (IM) Work Plan (IMWP) for the Press Site Transformer Building (K7-1205C), Kennedy Space Center (KSC), Florida (Figure 1). The purpose of the proposed IM activities is to remove soil affected with polychlorinated biphenyls (PCBs) greater than the Florida Department of Environmental Protection (FDEP) residential direct-exposure Soil Cleanup Target Level (R-SCTL) of 0.5 mg/kg and encapsulate concrete exhibiting PCB concentration greater than the Toxic Substance Control Act (TSCA) threshold of 50 mg/kg. This will allow the existing Land Use Control Implementation Plan (LUCIP) for soil to be eliminated and allow for unrestricted access but a LUCIP will be required for the encapsulated concrete. The site plan is included as Figure 2.
2. Describe facility usage. The Press Site is located in the Vehicle Assembly Building (VAB) Area. The Site is bordered by Saturn Parkway to the north, the Operation Support Building Area (OSBA) to the west, the Turning Basin to the east and a wooded area to the south. The Press Site was constructed from 1967 to 1968 to facilitate news coverage of KSC launches. The Site consists of: the grand stand, Press Site Communications Control Building (K7-1205), Cable Terminal Building (K7-1153), and ABC News Media Building (K7-1103). Subsequent construction from 1968 to present include: the Transformer Building (K7-1205-C), NASA News Center (K7-1207), additional news service trailers, and News Building (K7-1205-F). A site plan is provided as Figure 2.
3. Is the facility normally occupied? Describe how site control will be performed and how area workers will be informed of health and safety issues associated with the Interim Measure. No. The facilities in this area are occupied only during pre-launch and base operations where news coverage is requested. The Transformer Building (K7-1205C) is also infrequently occupied with restricted access limited to maintenance personnel. Given the restricted access, the Transformer Building (K7-1205C) is considered a Low Occupancy area where worker exposure

INTERIM MEASURES WORK PLAN FOR PCB-CONTAMINATED SITES

is limited to less than 335 hours per work year. The Transformer Building (K7-1205C) is located at the southern portion of the Press Site and in an area that will not affect press operations. Safety barricades, caution tape, and/or fencing will be used to identify the work and support zones and to restrict entry in the event personnel are in this area during removal activities. During excavation, a site supervisor will be on site as a contact person and to maintain operational safety. IM activities will be scheduled and coordinated with the facility manager and during a time of no launch activities to minimize disruptions and potential delays.

4. When did the release(s) occur at this facility, if known. It is unknown when the release(s) occurred at the facility.
5. Are the PCB detections associated with a liquid release, paint residue, or other (please describe)? The release of PCBs and detections in multiple media (concrete and soil) adjacent to the electrical transformer located inside Building K7-1205C indicates the potential for a liquid release.

Interim Measure Information

6. List the specific contaminants being addressed by the IM, maximum facility concentrations, and the associated proposed cleanup goals and source(s) (industrial SCTL, etc.).

Contaminant	Maximum Facility Concentration (mg/kg)	Cleanup Goal (mg/kg)	Cleanup Goal Source
Total PCBs - Soil	2.55	0.5	FDEP R-SCTL
Toital PCBs - Concrete	120.5	Encapsulation	40 CFR 761.30(p)

Notes:

- (a) The soil sample locations and results are depicted on [Figure 3](#). The concrete sampling locations and results are depicted on [Figure 4](#).

7. Will a LUCIP (land use control implementation plan) be required following completion of the IM (i.e., will residual concentrations of any contaminant exceed applicable residential criteria)? A LUCIP will not be required for soil at the Press Site after completion of the proposed excavation activities; however the concrete slab affected with PCBs above screening criteria will be double washed and encapsulated in accordance with 40 CFR §761.30(p) and managed in place under a LUCIP.

INTERIM MEASURE WORK PLAN FOR PCB-CONTAMINATED SITES

8. List each proposed excavation area, contaminants of concern, area of excavation, and associated depth intervals. Include figure(s) showing the horizontal extent of each proposed excavation area.

Area ^(a)	Contaminant of Concern	Area of Excavation (ft ²)	Volume of Excavation (yd ³)	Depth Interval (ft BLS)	Comments
A	Total PCBs	42	0.78	0-0.5	Non-TSCA soil
B	Total PCBs	105	1.95	0-0.5	Non-TSCA soil
C	Total PCBs	101	7.48	0-3.0	Non-TSCA soil
D	Total PCBs	77	NA	NA	Encapsulate TSCA concrete

Notes:

- (a) The proposed excavation areas and coordinates for soil are depicted on [Figure 5](#). The proposed coordinates for the concrete encapsulation area are depicted on [Figure 6](#). Photographs of the excavation areas are provided in [Figure 7](#). The excavation coordinates are summarized in [Table 1](#). For Area C, excavation will terminate at the depth indicated or upon reaching the water table, whichever is encountered first.

9. Will confirmation samples be required? If so, describe. Consider the need for both vertical and horizontal extent samples and indicate sampling frequencies (number of samples per square foot, etc). No. Confirmation soil samples will not be required because soil excavation will extend horizontally and vertically to soil samples that were below screening criteria. In addition, encapsulation of concrete will extend horizontally to concrete samples that were below screening criteria.

10. Will shoring or dewatering be required? If so, describe. No, shoring and dewatering should not be required based on the excavation depth and location of the excavation.

11. Are there any special decontamination requirements? If so, describe. Decontamination fluids associated with the double washing of the concrete pad with PCB concentrations greater than TSCA level (50 ppm) shall be segregated from decontamination fluids associated with the excavation of media with PCB concentrations less than 50 ppm (Non-TSCA levels). Therefore, two separate decontamination areas shall be established. The laboratory method used to characterize the decontamination fluids and disposal methods are discussed in #15.

According to the Generic Work Plan for PCB-Contaminated Sites, equipment that comes into contact with PCBs greater than 50 ppm in shall be decontaminated by washing with water. Visible removal of all potentially contaminated material shall be the initial decontamination

INTERIM MEASURES WORK PLAN FOR PCB-CONTAMINATED SITES

standard. One wipe sample will be collected from the part of the equipment that has most waste contact to verify that cleanup level is met.

Waste Handling and Disposal

12. How will the excavated soil be stored prior to disposal?

☐ Drums ☐ Roll-offs ☒ Other (describe):

Media removed from the areas with PCB concentrations less than 50 parts per million (ppm) will be directly loaded onto trucks or stockpiled and subsequently loaded onto trucks. Each truck will be weighed and manifested, and the material will be disposed of at an approved RCRA Subtitle D landfill, which will provide weigh tickets and copies of the signed manifests.

13. How will miscellaneous debris and decontamination fluids be stored prior to disposal?

☒ Drums ☐ Roll-offs ☒ Other (describe): According to the Generic Work Plan for PCB-Contaminated Sites, the PCB concentrations of personal protective equipment and like items is not applicable, and the materials can be disposed of in an approved Subtitle D landfill. Also, since the PCB concentration in the source is less than 50 ppm, then the concentration of PCB in the liquid waste (decontamination fluids) is not applicable and the decontamination water will be disposed of in accordance with the NASA-KSC waste management practices. The Investigation-Derived Waste (IDW) Management Plan indicates that decontamination water will be disposed of as industrial wastewater with waste process code KNS-NC0031.

14. Are there any special waste segregation requirements? If so, describe. Yes. Decontamination fluids from the area with PCB concentrations greater than 50 ppm shall be segregated from the media and associated decontamination fluids from the areas with PCB concentrations less than 50 ppm.

15. How will the waste be characterized for disposal? The excavated material will be characterized using the existing analytical results collected as part of the VAB LUCIP Elimination Sampling Program.

According to the Generic Work Plan for PCB-Contaminated Sites, if the PCB concentration in the source is less than 50 ppm, then the concentration of PCB in the liquid waste (decontamination fluids) is not applicable and the decontamination water shall be disposed of in accordance with the NASA-KSC waste management practices. The IDW Management Plan indicates that decontamination water will be disposed of as industrial wastewater with waste process code KNS-NC0031.

Also, according to the Generic Work Plan for PCB-Contaminated Sites, if the PCB concentration in the source is greater than 50 ppm, then the concentration of PCB in the liquid waste

INTERIM MEASURE WORK PLAN FOR PCB-CONTAMINATED SITES

(decontamination fluids) shall be analyzed for proper disposal using EPA Method 8082 for PCBs. If the concentration of PCBs is less than 0.5 µg/l, then unrestricted disposal applies. If the concentration of PCBs is greater than 0.5 µg/l but less than 3 µg/l, then the decontamination water can be disposed of at the Cape Canaveral Air Force Station wastewater treatment plant. If the concentration of PCBs is greater than 3 µg/l, then the decontamination water must be disposed of at a facility permitted under §761.70.

16. Are there any special fill characterization or compaction requirements? If so, describe. Soil shall be compacted to 98% Standard Proctor in parking areas and beneath roadways and to 95% Standard Proctor in all other areas to minimize post-excavation settlement.

Other Issues

17. Are there any other specific issues, including health and safety that need to be considered? If so, describe. Yes. The facility manager for the Transformer Building (K7-1205C) requires a two week notice prior to accessing the interior of the building.

General Issues

An Environmental Checklist (KSC Form 21-608) will be completed.

An Excavation Permit Request will be prepared. Once approved, the contractor will arrange for and attend a utility marking.

For work around any active electrical equipment, the contractor shall discuss the project with the High Voltage Shop to coordinate work and arrange for an outage, if necessary. The contractor also shall arrange for an escort from High Voltage, if necessary.

The contractor will utilize the existing site-specific Health and Safety Plan.

The KSC project manager and contractor will meet with the Facility Manager(s) and/or tenants to discuss the project approach, coordinate activities, and establish work zones.

The contractor will submit waste profile information and disposal authorization request to the disposal facility(ies), following review and approval by the KSC project manager.

The contractor will establish work site controls by posting appropriate notices and the excavation permit. The contractor will use barricades or fence, as appropriate, to demarcate exclusion zones and will mark items within the work zone that should be protected.

INTERIM MEASURES WORK PLAN FOR PCB-CONTAMINATED SITES

The contractor will prepare contaminated material staging/packaging areas and ensure the availability of appropriate waste storage containers, packaging, and labels. The KSC-approved drum types for the storage of IDW are 55-gallon capacity, Department of Transportation approved UN1A1/Y1.4/100 (liquids) and/or UN1A2/Y1.4/100 (solids) drums or better. At sites where hazardous IDW could be generated, use only rust-free and non-dented drums. Reconditioned drums will not be used.

Asphalt and/or concrete surfaces shall be saw cut prior to excavation/removal.

Vehicles being used for transporting wastes will be checked for apparent soundness and suitability. Each vehicle will be logged in and out of the site by the waste coordinator or a designee. After loading, the exterior of each vehicle will be checked to verify decontamination was completed, the tarps are down and secure, proper placards posted, and that there is no visible evidence of spillage. The original and appropriate copies of the manifest(s), signed by a Government Representative and the driver, will be given to the driver prior to leaving the site.

Each manifest will be assigned a unique number. Manifests will be completed for signature by a Government Representative for each waste shipment.

The off-site disposal facility will complete disposal and/or treatment of the waste in accordance with its federal, state, and local permits. The original manifests, completed by the facility, and Certificate(s) of Disposal will be returned to the KSC project manager within 45 days or an Exception Report will be filed with the Regional USEPA office. All documentation relative to waste transportation and disposal will be supplied to the KSC project manager.

The IM will take place around transformers and load break switches. Underground utilities shall be located prior to implementing the IM. Due to the proximity to the transformers, soil shall be excavated by using a vacuum truck and/or hand digging.

Air monitoring will be performed in the work zone and perimeter work zone areas during the excavation and load-out activities as specified in the site specific health and safety plan.

Approximately 77 square feet of PCB-affected concrete inside the Transformer Building will be encapsulated in accordance with 40 CFR §761.30(p), which is provided below.

(p) *Continued use of porous surfaces contaminated with PCBs regulated for disposal by spills of liquid PCBs.* (1) Any person may use porous surfaces contaminated by spills of liquid PCBs at concentrations $>10 \mu\text{g}/100 \text{ cm}^2$ for the remainder of the useful life of the surfaces and subsurface material if the following conditions are met:

(i) The source of PCB contamination is removed or contained to prevent further release to porous surfaces.

INTERIM MEASURE WORK PLAN FOR PCB-CONTAMINATED SITES

(ii) If the porous surface is accessible to superficial surface cleaning:

(A) The double wash rinse procedure in subpart S of this part is conducted on the surface to remove surface PCBs.

(B) The treated surface is allowed to dry for 24 hours.

(iii) After accessible surfaces have been cleaned according to paragraph (p)(1)(ii) of this section and for all surfaces inaccessible to cleanup:

(A) The surface is completely covered to prevent release of PCBs with:

(1) Two solvent resistant and water repellent coatings of contrasting colors to allow for a visual indication of wear through or loss of outer coating integrity; or

(2) A solid barrier fastened to the surface and covering the contaminated area or all accessible parts of the contaminated area. Examples of inaccessible areas are underneath a floor-mounted electrical transformer and in an impassible space between an electrical transformer and a vault wall.

(B) The surface is marked with the M_LMark in a location easily visible to individuals present in the area; the M_LMark shall be placed over the encapsulated area or the barrier to the encapsulated area.

(C) M_LMarks shall be replaced when worn or illegible.

The locked door and Transformer Building walls shall serve as the solid barrier to meet the requirements of 40 CFR 761.30(p)(1)(iii)(A)(2) provided above.

A method to suppress dust and particulates will be available on site during excavation activities.

18. Work Schedule. A detailed work schedule shall be developed prior to the start of construction.

Table 1
Summary of Excavation and Encapsulation Boundary Coordinates
Interim Measure Work Plan
KSC Press Site Transformer Building (K7-1205C)
Kennedy Space Center, FL

PRES IMWP
Revision: 0
December 2014

Sample Location	Area of Concern, Excavation Area (if applicable)	Easting	Northing
PRES-S0001A	Area A	234529.1009	470693.4095
PRES-SB0013	Area A	234528.8264	470691.0854
PRES-SB0014	Area A	234530.6436	470691.9497
PRES-S0001B-A	Area B	234536.8791	470698.1088
PRES-SB0001	Area B	234537.1773	470698.2380
PRES-SB0002	Area B	234540.4001	470699.2920
PRES-SB0011	Area B	234536.7180	470700.8401
PRES-SB0016	Area B	234540.6348	470696.4908
PRES-S0001B-A	Area C	234536.8791	470698.1088
PRES-S0001C	Area C	234538.4995	470692.4372
PRES-SB0001	Area C	234537.1773	470698.2380
PRES-SB0003	Area C	234538.0414	470695.8990
PRES-SB0015	Area C	234539.7983	470694.6643
PRES-SB0016	Area C	234540.6348	470696.4908
CO0002	Area D	234532.8949	470692.5670
CO0003	Area D	234536.7946	470693.2839
Point 1	Area D	234532.7459	470693.1436
Point 2	Area D	234533.1643	470691.4979
Point 3	Area D	234537.0694	470692.3905
Point 4	Area D	234536.5673	470694.0920

Notes:

Eastings and Northings are in Florida State Plane East, meters.

IMWP = Interim Measure Work Plan

KSC = Kennedy Space Center

LOC = location of concern

SB = soil boring

Table 2
Coordinates of Sample Locations in Excavation and Encapsulation Areas
Interim Measure Work Plan
KSC Press Site Transformer Building K7-1205C
Kennedy Space Center, FL

PRES IMWP
Revision: 0
December 2014

Sample Location	Area of Concern, Excavation Area (if applicable)	Easting	Northing	Inside, Outside, or on Boundary
Soil Excavation Areas				
PRES-S0001A	Area A	234529.101	470693.410	Boundary
PRES-SB0006	Area A	234529.327	470692.623	Inside
PRES-SB0013	Area A	234528.826	470691.085	Boundary
PRES-SB0014	Area A	234530.644	470691.950	Boundary
PRES-S0001B-A	Area B	234536.879	470698.109	Boundary
PRES-SB0001	Area B	234537.177	470698.238	Boundary
PRES-SB0002	Area B	234540.400	470699.292	Boundary
PRES-SB0011	Area B	234536.718	470700.840	Boundary
PRES-SB0016	Area B	234540.635	470696.491	Boundary
PRES-S0001B-A	Area C	234536.879	470698.109	Boundary
PRES-S0001C	Area C	234538.500	470692.437	Boundary
PRES-SB0001	Area C	234537.177	470698.238	Boundary
PRES-SB0003	Area C	234538.041	470695.899	Boundary
PRES-SB0015	Area C	234539.798	470694.664	Boundary
PRES-SB0016	Area C	234540.635	470696.491	Boundary
PRES-S0001		234534.367	470690.979	Outside
PRES-S0001B		234533.800	470696.974	Outside
PRES-S0001B-B		234530.883	470696.731	Outside
PRES-S0001B-D		234528.858	470699.567	Outside
PRES-S0001B-E		234527.805	470705.077	Outside
PRES-S0001B-F		234535.097	470706.697	Outside
PRES-SB0004		234537.848	470691.844	Outside
PRES-SB0005		234534.208	470690.296	Outside
PRES-SB0007		234528.810	470695.442	Outside
PRES-SB0008		234529.061	470698.957	Outside
PRES-SB0009		234527.471	470704.983	Outside
PRES-SB0010		234534.835	470707.117	Outside
PRES-SB0012		234527.920	470693.626	Outside
PRES-SB0017		234543.824	470696.837	Outside
PRES-SB0018		234544.006	470694.033	Outside

Table 2
Coordinates of Sample Locations in Excavation and Encapsulation Areas
Interim Measure Work Plan
KSC Press Site Transformer Building K7-1205C
Kennedy Space Center, FL

PRES IMWP
Revision: 0
December 2014

Sample Location	Area of Concern, Excavation Area (if applicable)	Easting	Northing	Inside, Outside, or on Boundary
Concrete Encapsulation Area				
CO0001		234534.946	470692.479	Inside
CO0002		234532.895	470692.567	Boundary
CO0003		234536.795	470693.284	Boundary
CO0004		234532.211	470694.771	Outside
CO0005		234534.153	470695.328	Outside
CO0006		234535.936	470695.615	Outside

Notes:

Eastings and Northings are in Florida State Plane East, meters.

IMWP = Interim Measure Work Plan

KSC = Kennedy Space Center

LOC = location of concern

SB = soil boring

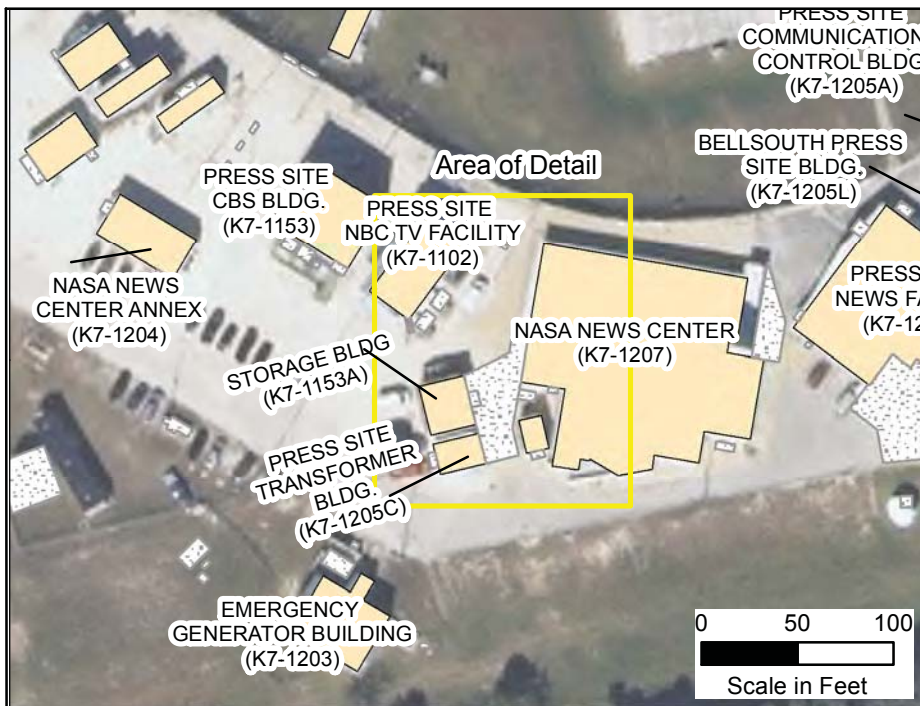


Site Location Map Inter Measure Work Plan



KSC Press Site
NASA Kennedy Space Center, Florida

Project Number: TL014021.0000

Figure 1

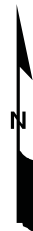


Legend

-  Concrete
-  Structure

0 10 20
Scale in Feet

Notes:
IMWP - Interim Measure Work Plan
KSC - Kennedy Space Center
NASA - National Aeronautics and Space Administration
PRES - KSC Press Site

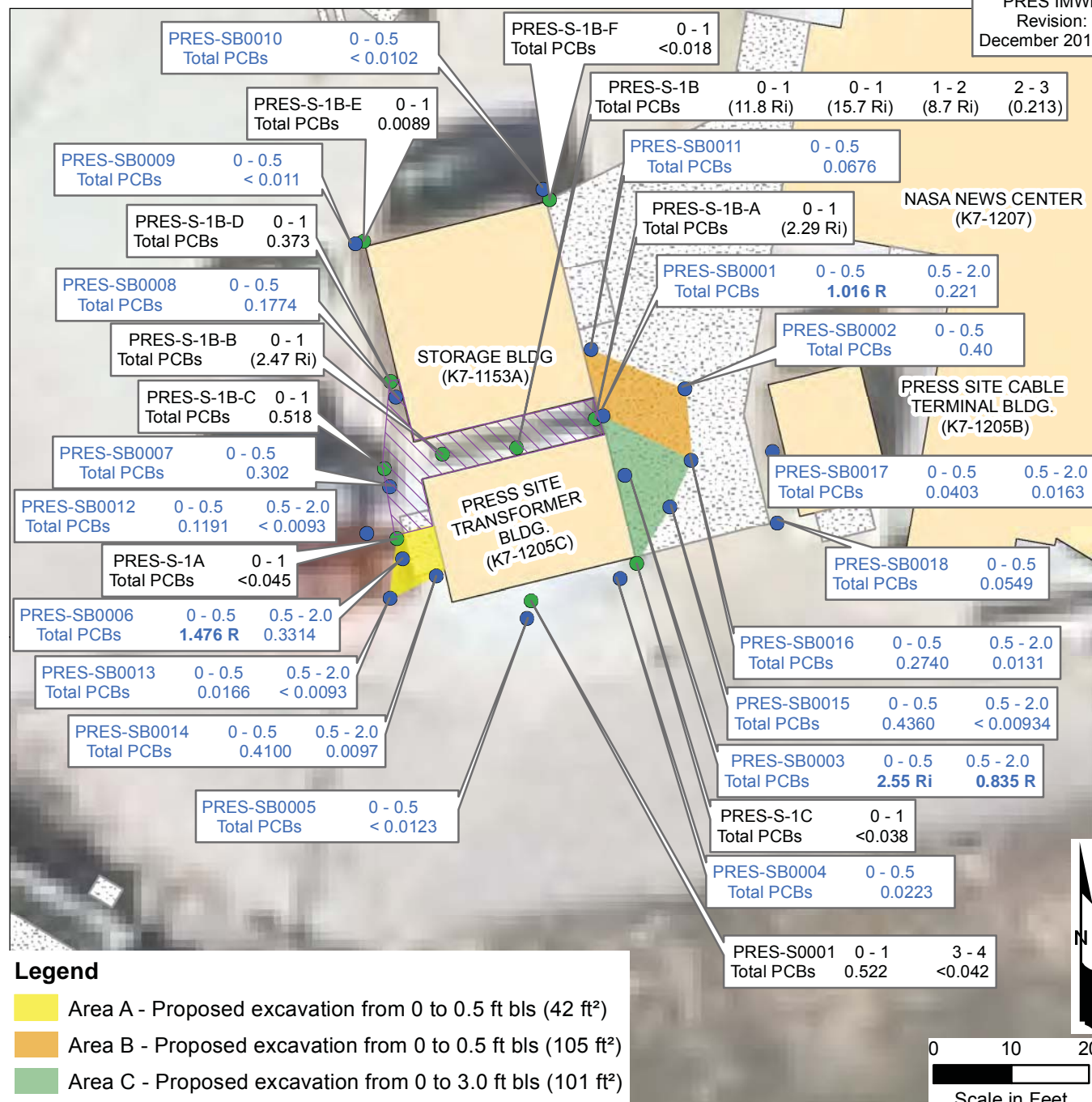


Site Plan Interim Measure Work Plan

KSC Press Site
NASA Kennedy Space Center, Florida

Project Number: TL014021.0000

Figure 2

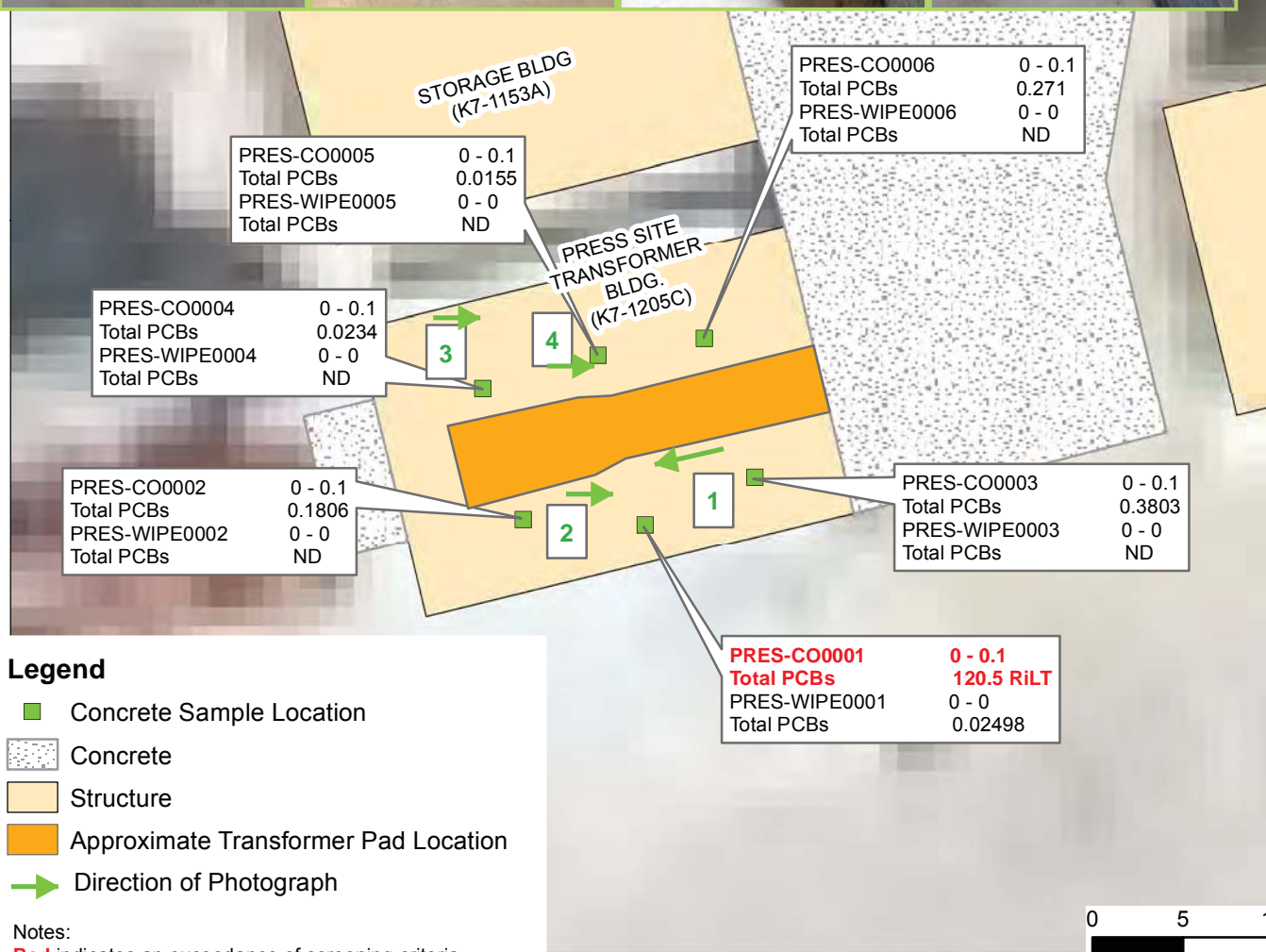


**PCB Concentrations in Soil
Interim Measure Work Plan**

KSC Press Site
NASA Kennedy Space Center, Florida

Project Number: TL014021.0000

Figure 3



Legend

- Concrete Sample Location
- Concrete
- Structure
- Approximate Transformer Pad Location
- ➔ Direction of Photograph

Notes:

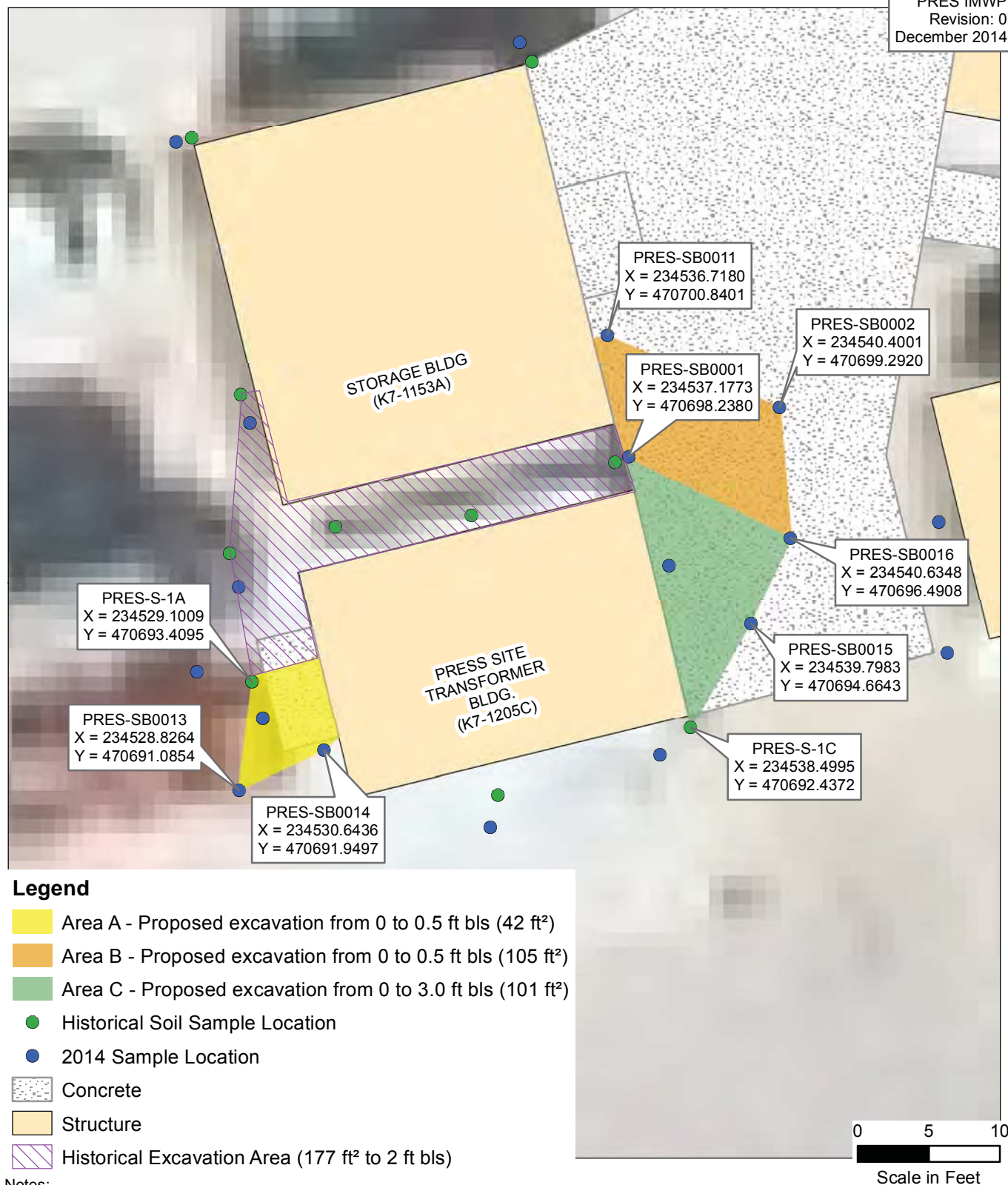
Red indicates an exceedance of screening criteria
Coordinates are in Florida State Plane East, 1983 meters
Depths in feet below land surface (ft bls)
ft² - square feet
IMWP - Interim Measure Work Plan
KSC - Kennedy Space Center
NASA - National Aeronautics and Space Administration
PCBs - polychlorinated biphenyls
PRES - KSC Press Site
R - exceeds Residential SCTL
i - exceeds Industrial SCTL
SCTL - Soil Cleanup Target Level
TSCA - Toxic Substances Control Act

PCB Concentrations in Concrete Interim Measure Work Plan

KSC Press Site
NASA Kennedy Space Center, Florida

Project Number: TL014021.0000

Figure 4

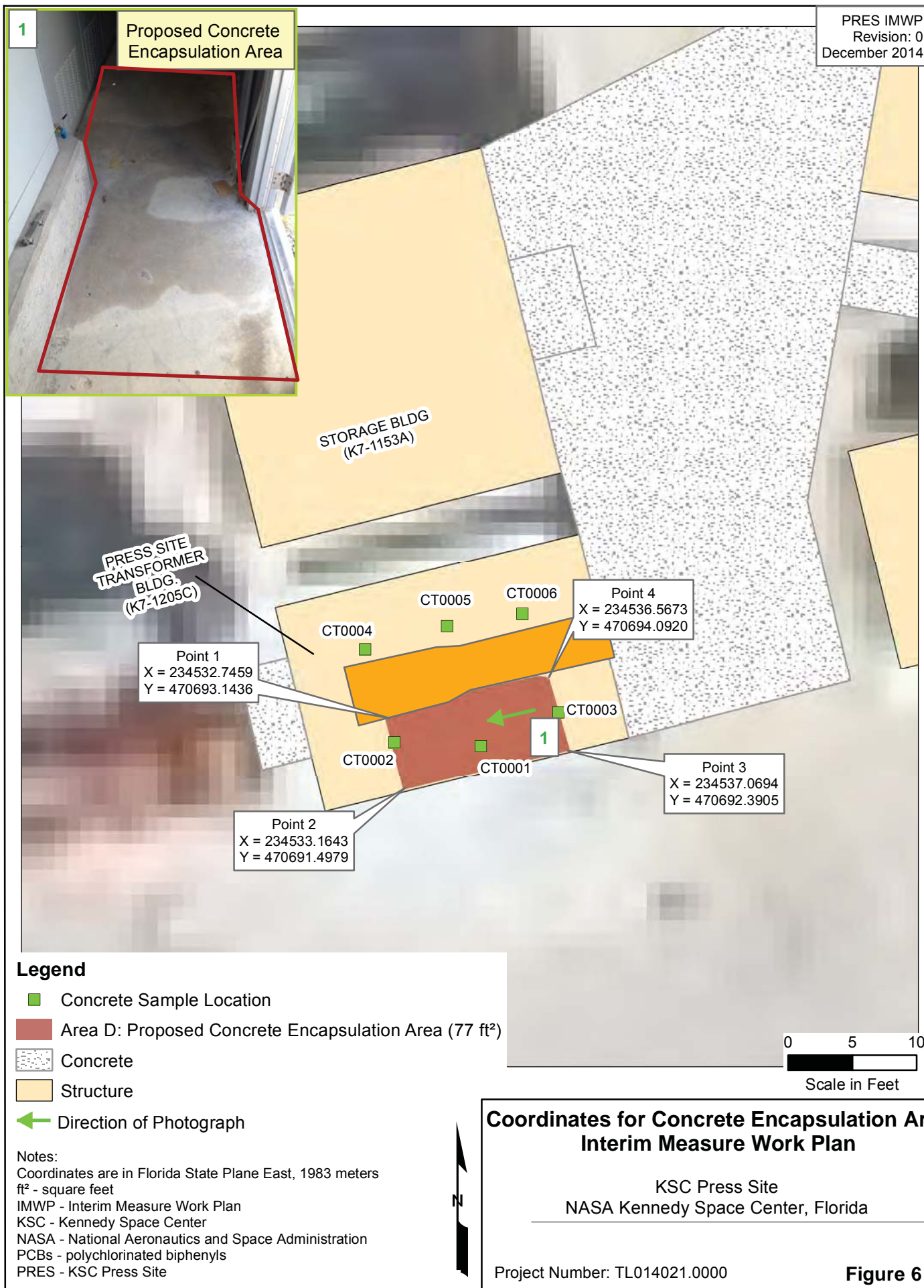


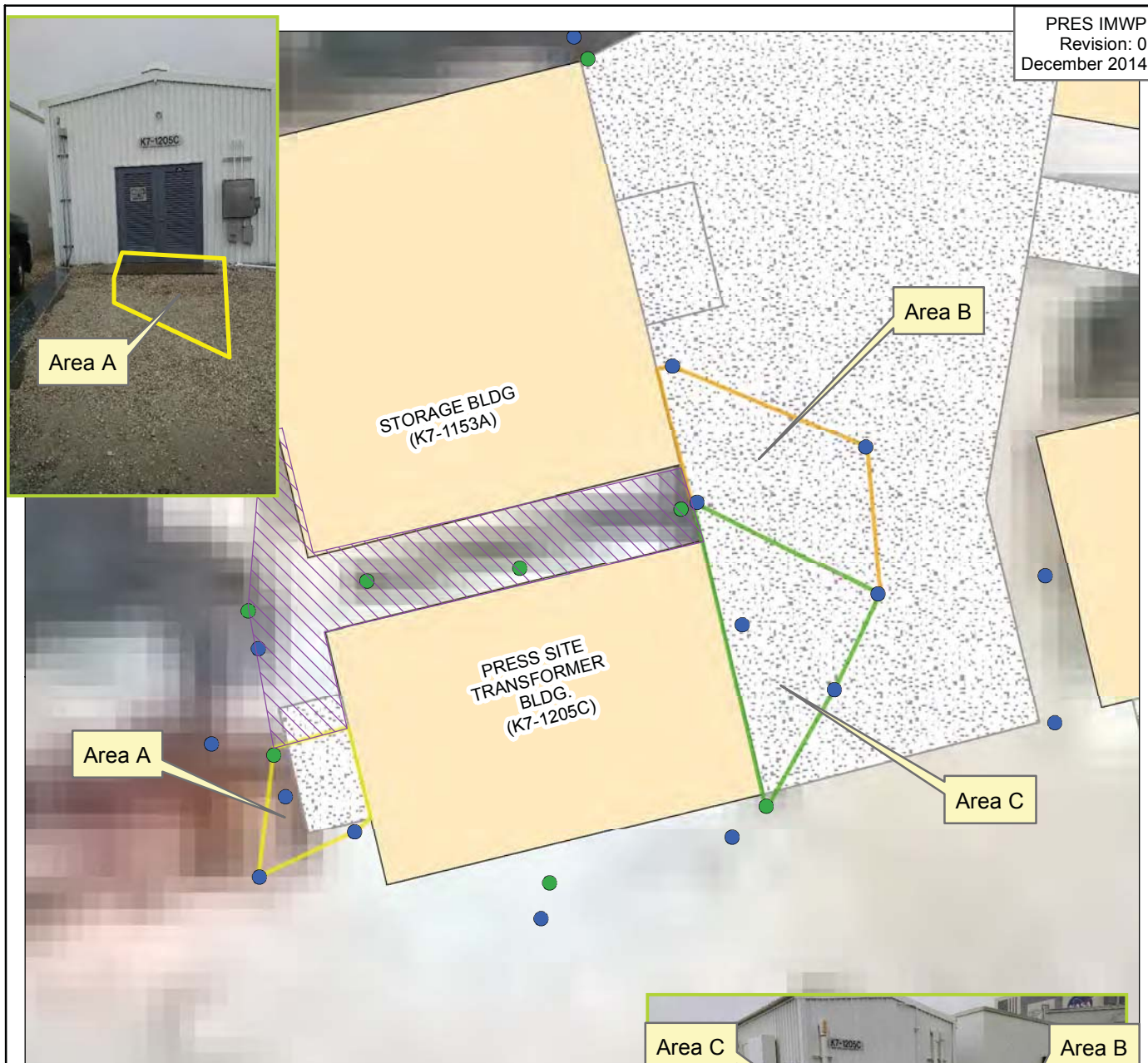
Coordinates for PCB Soil Excavation Interim Measure Work Plan

KSC Press Site
NASA Kennedy Space Center, Florida

Project Number: TL014021.0000

Figure 5





Legend

- Area A - Proposed excavation from 0 to 0.5 ft bls (42 ft²)
- Area B - Proposed excavation from 0 to 0.5 ft bls (105 ft²)
- Area C - Proposed excavation from 0 to 3.0 ft bls (101 ft²)
- Historical Soil Sample Location
- 2014 Sample Location
- Concrete
- Structure
- Historical Excavation Area (177 ft² to 2 ft bls)

Notes:

Depths in feet below land surface (ft bls)
ft² - square feet

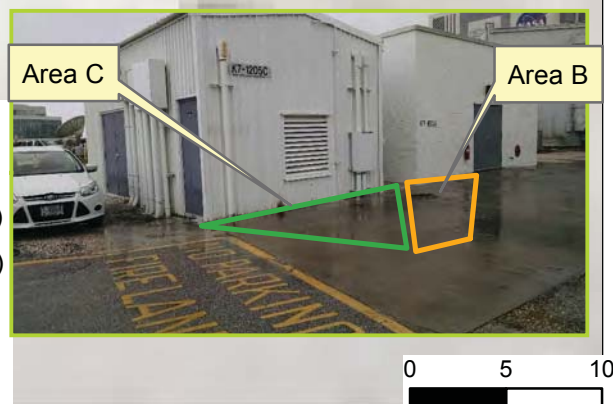
IMWP - Interim Measure Work Plan

KSC - Kennedy Space Center

NASA - National Aeronautics and Space Administration

PCBs - polychlorinated biphenyls

PRES - KSC Press Site



Photographs of Proposed Excavation Areas Interim Measure Work Plan

KSC Press Site
NASA Kennedy Space Center, Florida

Project Number: TL014021.0000

Figure 7